

# Notice of Allowability

Application No.

10/622,515

Examiner

Ling-Siu Choi

Applicant(s)

AOI, NOBUO

Art Unit

1713

## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 02/26/2007.
2. ☒ The allowed claim(s) is/are 1-4 and 45-47.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All b) ☐ Some\* c) ☐ None of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

**DETAILED ACTION**

1. This Office Action is in response to the Amendment filed February 26, 2007.  
Claims 1-50 are pending.

***Examiner's Amendment***

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CAR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Ms Lisa Kilday on March 26, 2007.

3. The application has been amended as follows:

Cancel claims 5-44 and 48-50;

Claim 3, line 2, change "having a substituted acetylenyl group" to --having four substituted acetylenyl groups--.

***Allowable Subject Matter***

4. Claims 1-4 and 45-47 are allowed.

Art Unit: 1713

5. The following is an examiner's statement of reasons for allowance:

The present claims are allowable over the closest references: Aoi (JP 2001-332543), Lee et al. (EP 1 170 273 A1), and Reppe et al. (US 2,232,867).

Summary of Claim 1:

An interlayer insulating film comprising a polymer in which	
a first monomer	having four substituted acetylenyl group and polymerizable in the three-dimensional direction
a second monomer	having two substituted cyclopentanonyl group and polymerizable in the two-dimensional direction
are three-dimensionally polymerize	

Summary of Claim 45:

A polymer composition comprising three-dimensionally polymerizing of	
a first monomer	having four substituted acetylenyl group and polymerizable in the three-dimensional direction
a second monomer	having two substituted cyclopentanonyl group and polymerizable in the two-dimensional direction

Aoi discloses an interlayer insulation film comprising a polymer obtained by polymerizing a first bridging molecule having at least three function groups and a second bridging molecule having two functional groups (abstract; Claims 1-12).

However, Aoi does not teach or fairly suggest an interlayer insulation film comprising the polymer prepared by polymerizing the claimed monomer containing four substituted acetylenyl groups and the claimed monomer containing two substituted cyclopentanonyl

Art Unit: 1713

groups.

Lee et al. disclose a thin film obtained by vacuum-deposition polymerizing of an organic compound having at least one acetylene group (abstract; [0055]; claim 1). However, Lee et al. do not teach or fairly suggest a film comprising the polymer prepared by polymerizing the claimed monomer containing four substituted acetylenyl groups and the claimed monomer containing two cyclopentanonyl groups.

Reppe et al. disclose an alkinol obtained by reacting an organic compound having substituted acetylene with a ketone [ $R_1R_2C=O$  ( $R_1$  and  $R_2$  = hydrogen or an organic radical) or aliphatic ketone or aldehyde] (page 1, lines 49-55; claims 5 and 9-10). However, Reppe et al. do not teach or fairly suggest a polymer prepared by polymerizing the claimed monomer containing four substituted acetylenyl group and the claimed monomer containing two substituted cyclopentanonyl groups.

In light of the above discussion, it is evident as to why the present claims are patentable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

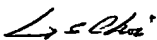
### **Conclusion**

6. Any inquiry concerning this communication or earlier communications from the

Art Unit: 1713

examiner should be directed to Ling-Siu Choi whose telephone number is 571-272-1098.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reach on 571-272-1114.



LING-SUI CHOI  
PRIMARY EXAMINER

March 28, 2007